Chapter 5

Deferred Construction and Repair/Renovation

Highlights . . .

- In 1996, 36 percent of all institutions with biomedical research space reported capital projects, either construction or repair/renovation, that were needed but had to be deferred because funds were not available.

- The estimated cost for deferred biomedical research construction and repair/renovation projects in 1996 totaled $4.1 billion. Over three quarters of these deferred capital projects were included in institutional plans.

- The estimated cost for deferred biomedical construction projects totalled $2.3 billion, or 57 percent of all deferred biomedical capital projects.

Data Considerations

Since its inception in 1988, the *Survey of Scientific and Engineering Research Facilities at Colleges and Universities* has provided considerable data on the amount, condition, and capital project activity in out nation's research-performing institutions. An issue of critical importance to policy makers and an impetus for the legislation mandating the biennial facilities' survey is the desire to determine how much more S&E research space colleges and universities need, as well as to determine the costs of repairing/renovating existing S&E research facilities.

The 1996 survey expanded a question asked for the first time in 1994 to determine construction and repair/renovation costs that institutions had deferred. The earlier effort requested information only about deferred capital projects that were included in an approved institutional plan. In 1996, institutions reported separately the construction and repair/renovation costs for projects included in such plans, as well as for projects not in an approved plan.

Four criteria were used to define deferred projects (see Item 7 of the survey in Appendix B):

- The project must be necessary to meet the current S&E research program commitments;
- The project was not scheduled to begin in fiscal year 1996 or 1997;
- The project was not funded; and
- The project was neither for the purpose of developing new programs nor expanding faculty beyond what is required to fulfill current S&E research program commitments.

These criteria used to define deferred capital projects are intended to limit the notion of need to defined boundaries and to avoid respondents' providing their desires for new or improved space. The term "research program commitment" forces respondents to consider only those research and development (R&D) activities

that are budgeted, approved, and funded, which precludes institutions from indicating they need space in a field for which they do not currently have a research program. The boundaries placed upon these definitions of need intentionally produce conservative estimates, rather than unbounded and untested wish lists.

Findings

The Institutional Distribution of Deferred Capital Projects

In 1996, 36 percent of all institutions with biomedical research space reported construction or repair/renovation projects that were needed but had to be deferred because funds were not available. Twenty-five percent of the institutions had included these deferred projects in an approved institutional plan. Fifteen percent of the biomedical research institutions that reported deferred projects also identified projects that were not included in an approved plan.

The total estimated cost for deferred biomedical research construction and repair/renovation projects in 1996 was $4.1 billion. This total includes both projects that were in institutional plans and those that were not (Table 5-1).

Overall, more than three-quarters of the total deferred capital project expenditures reported by biomedical research institutions (79 percent or $3.2 billion) were included in institutional plans. Within all types of institutions, the vast majority of deferred capital project expenditures were a part of institutional plans.

Academic institutions accounted for 88 percent of the deferred construction and repair/renovation projects in the biomedical sciences. These institutions accounted for 81 percent of all biomedical research space (See Table 1-1). Nine percent of all deferred capital projects in the biomedical sciences were in the research organizations while only 3 percent of these projects were in hospitals.

Expenditures for deferred construction projects exceeded that for repair/renovation projects. The estimated cost for deferred biomedical research construction projects totalled $2.3 billion, or 57 percent of all deferred biomedical capital projects. For deferred expenditures included in institutional plans, construction expenditures were generally larger than repair/renovation expenditures (The exceptions were the top 50 institutions in research expenditures and research organizations). For deferred expenditures not included in institutional plans, repair/renovation expenditures were typically greater than construction expenditures (The exceptions were colleges and universities as a whole, the top 50 institutions in research expenditures, and hospitals).

The Distribution of Deferred Capital Projects by Biomedical Field

Deferred capital expenditures for biological sciences research space totalled $2.055 billion while deferred capital expenditures for medical sciences research space totalled $2.021 billion. With the exception of biological research space not included in an institutional plan, deferred construction expenditures were larger than deferred repair/renovation expenditures .

Table 5-1
Expenditures for deferred capital projects to construct or repair/renovate biomedical research facilities by institution type, type of project, and whether project was included in institutional plans

[dollars in millions]

INSTITUTION TYPE	Included in institutional plans		Not included in institutional plans		Total
	To construct new S&E research facilities	To repair/renovate existing S&E research facilities	To construct new S&E research facilities	To repair/renovate existing S&E research facilities	
Total	$1,901	1,332	415	428	4,076
Academic institutions	1,703	1,128	382	386	3,599
Colleges and universities	877	622	241	224	1,964
Top 50 in research expenditures	184	269	113	20	586
Other doctorate-granting	608	305	117	140	1,170
Nondoctorate-granting	85	48	11	64	208
Medical schools	826	506	141	162	1,635
Research organizations	149	190	–	32	371
Hospitals	49	14	33	10	106

NOTE: Because of rounding, components may not add to totals.

SOURCE: National Institute of Health, *The Status of Biomedical Research Facilities: 1996*, Bethesda, MD, 1997

Table 5-2
Expenditures for deferred capital projects to construct or repair/renovate biomedical research facilities by field, type of project, and whether project was included in institutional plans

[dollars in millions]

FIELD	Included in institutional plans		Not included in institutional plans		Total
	To construct new S&E research facilities	To repair/renovate existing S&E research facilities	To construct new S&E research facilities	To repair/renovate existing S&E research facilities	
Biological research space	$850	743	207	255	2,055
Medical research space	1,051	589	208	173	2,021

NOTE: Because of rounding, components may not add to totals.

SOURCE: National Institute of Health, *The Status of Biomedical Research Facilities: 1996,* Bethesda, MD, 1997